PROJECT TITLE : ANALYTICAL INVESTIGATIONS

PERIOD COVERED : DECEMBER 1 - 23, 1980

WRITTEN BY : E. LECOULTRE

COMPOUND IDENTIFICATION

A new metabolic product of yeast *Candida utilis* NCYC 707 was detected in fermented extract NINO 63-6-45 by gas chromatography (peak RT 3.98 min ; Fig. 1).

Following the request made by Process Development (1) the compound was investigated by GC/MS and identified by M^+ and fragmentation as 2 - butanone.

ORGANIC ACIDS BY GC

The study of the derivatization of organic mono-, di- and tri-carboxylic acids with p-bromophenacyl bromide and quantitation by gas chromatography was continued (2). Although derivatization works satisfactorily, p-bromophenacyl derivatives of di-and tri-carboxylic acids could not be analysed by gas chromatography, due to partial decomposition.

The possibility of analysing acetic, citric, lactic, malic, succinic, fumaric, tartaric and pyruvic acid as ethyl ester derivatives, prepared via silver carboxylates and reaction with ethyl iodide in pentane (3), is presently being investigated.

REFERENCES

1. Verbal request by C. Ruf, December 1980.
2. E. Lecoultre, PME Research Laboratory Monthly Progress Report September 1980.
3. R. Gloor and H. Leidner, Chromatography, 9, 618 (1976).

E. Lecoultre

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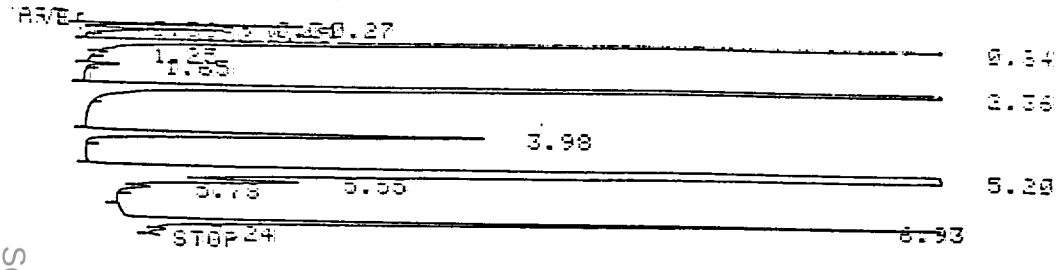

RUN # 30
CAPE

RUN # 30
TTLE 36
EA %

RT	AREA	AREA %	
0.27	1254	0.587	
0.31	1082	0.506	
0.36	345	0.161	
0.45	2025	0.948	
0.52	760	0.356	
0.84	87280	40.847	Ethanol
1.25	447	0.209	
1.65	547	0.256	
1.96	59360	27.780	2-Propanol
2.90	15740	7.366	2-butanone
3.98	332600	155.656	2-butanol
5.20	8132	3.806	n-butanol
5.55	1611	0.754	
5.75	22350	10.460	3-hydroxy-2-butanone
6.24	658	0.308	

FACTOR: 2.5000 E+ 0

Fig. 1
FERMENTED EXTRACT NINO 63 - 6 - 45

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